

In the Claims:

Please amend the claims as follows:

1. (Amended) A method of filling a vial with a predetermined medicament, comprising the following steps:

providing a vial; a resealable stopper cap including a body defining a predetermined wall thickness in an axial direction thereof, wherein the body defines a needle penetration region that is pierceable with a needle to form a needle aperture therethrough, and is heat resealable to hermetically seal the needle aperture by applying laser radiation from a laser source at a predetermined wavelength and power thereto ~~a base portion substantially infusible in response to the application of thermal energy thereto and compatible with the predetermined medicament for exposure to the medicament and for sealing the medicament within the vial; a resealable portion overlying the base portion and being fusible in response to the application of thermal energy thereto; and a locking member engageable with the cap and vial for securing the stopper cap to the vial; and a laser source that transmits laser radiation;~~

selecting a predetermined wavelength and power of the laser source;

selecting a predetermined color and opacity of the needle penetration region of the resealable stopper that substantially absorbs laser radiation at the predetermined wavelength and power to hermetically seal a needle aperture formed in the needle penetration region thereof in a predetermined time period;

selecting the predetermined wall thickness of the body of the resealable stopper to substantially absorb the laser radiation at the predetermined wavelength and substantially prevent the passage of radiation through the predetermined wall thickness of the body;

prior to filling the vial with medicament, assembling the stopper cap and locking member to the vial and forming a substantially gas-tight seal between the stopper cap and vial;

sterilizing the empty assembled stopper cap, locking member and vial;

penetrating the needle penetration region of the body cap with a needle coupled in fluid communication with a source of the predetermined medicament;

introducing the predetermined medicament through the needle and into the interior of the vial;

withdrawing the needle from the needle penetration region of the body and forming a needle aperture therein cap; and

applying laser radiation from the laser source at the predetermined wavelength and power to the needle penetration region of the body;

substantially absorbing within the needle penetration region of the body the laser radiation at the predetermined wavelength and substantially preventing the passage of radiation through the predetermined wall thickness of the body; and

causing the laser radiation at the predetermined wavelength and power to hermetically seal the needle aperture formed in the needle penetration region of the body within the predetermined time period to ~~applying sufficient thermal energy to the penetrated region of the resealable portion of the cap to fuse the penetrated region and~~ form a substantially gas-tight seal between the penetrated region and the interior of the vial.

2. (Cancelled)

3. (Amended) A method as defined in claim 1, wherein the ~~cauterizing~~ sterilizing step includes engaging the penetrable surface of the ~~resealable portion~~ needle penetration region of the body with a heated member to ~~cauterize~~ sterilize the surface.

4. (Cancelled)

5. (Amended) A method as defined in claim 1, wherein the ~~cauterizing~~ sterilizing step includes providing a laser source, and transmitting radiation from the laser source onto the penetrable surface of the ~~resealable portion~~ needle penetration region of the stopper body to ~~cauterize~~ sterilize the surface.

6. (Cancelled)

7. (New) A method as defined in claim 1, further comprising the step of using the body to thermally insulate the medicament in the vial from the laser energy applied by the laser source to avoid thermal damage to the medicament in the vial.

8. (New) A method as defined in claim 1, wherein the step of providing a resealable stopper includes providing a body defining an underlying portion formed of a first material compatible with the predetermined medicament and defining a medicament-exposed surface exposed to the predetermined medicament within the vial; and a resealable portion overlying the underlying portion, the resealable portion and underlying portion being penetrable by the needle for introducing the predetermined medicament through the stopper and into the vial, wherein the penetrable region of the underlying portion is substantially infusible in response to the application of thermal energy from the laser source, and the penetrable region of the resealable portion is fusible in response to the application of thermal energy from the laser source to form a gas-tight seal between the resealable portion and the medicament in the vial upon removing the needle therefrom.

9. (New) A method as defined in claim 1, wherein the sterilizing step includes achieving an approximately 6 log reduction in bio-burden on the needle penetration region of the stopper.

10. (New) A method as defined in claim 5, further comprising the step of sterilizing the needle penetration region within a cycle time of approximately 0.5 seconds.

11. (New) A method as defined in claim 1, further comprising the step of introducing medicament through a first fluid passageway of the needle, and allowing fluid to flow out of the vial through a second fluid passageway upon introducing medicament from the first fluid passageway into the vial.

12. (New) A method as defined in claim 1, comprising the step of introducing a preservative-free medicament through the needle and into the vial.

13. (New) A method as defined in claim 1, comprising the step of sterilizing the sealed, empty vial by the applying radiation thereto.

14. (New) A method as defined in claim 1, comprising the step of transmitting the laser radiation at a predetermined wavelength of approximately 10.6 μm .

15. (New) A method as defined in claim 1, comprising the step of transmitting the laser radiation at a predetermined wavelength of approximately 1.06 μm .

16. (New) A method as defined in claim 1, comprising the step of transmitting the laser radiation at a predetermined power within the range of approximately 15 to 30 Watts.

17. (New) A method of filling a container with a predetermined substance, comprising the following steps:

providing a container;

providing a laser source that transmits laser radiation at a predetermined wavelength and power;

providing a resealable stopper including a body defining a predetermined wall thickness in an axial direction thereof that substantially absorbs the laser radiation at the predetermined wavelength and power and substantially prevents the passage of such radiation therethrough, and a needle penetration region that is pierceable with a needle to form a needle aperture therethrough and that defines a predetermined color and opacity that substantially absorbs the laser radiation at the predetermined wavelength and power to hermetically seal a needle aperture therein in a predetermined time period;

providing a locking member for securing the stopper to the container;

prior to filling the container with the substance, assembling the stopper and locking member to the container and forming a substantially gas-tight seal between the stopper and container;

penetrating the needle penetration region of the body with a needle coupled in fluid communication with a source of the predetermined substance;

introducing the predetermined substance through the needle and into the interior of the container;

withdrawing the needle from the needle penetration region of the body and forming a needle aperture therein;

applying laser radiation from the laser source at the predetermined wavelength and power to the needle penetration region of the body;

substantially absorbing within the needle penetration region of the body the laser radiation at the predetermined wavelength and power and substantially preventing the passage of radiation through the predetermined wall thickness of the body; and

causing the laser radiation at the predetermined wavelength and power to hermetically seal the needle aperture formed in the needle penetration region of the body within the predetermined time period to form a substantially gas-tight seal between the penetrated region and the interior of the container.

18. (New) A method as defined in claim 17, further comprising the step of:
sterilizing the empty assembled stopper, locking member and container.

19. (New) A method as defined in claim 18, wherein the sterilizing step includes
engaging the penetrable surface of the needle penetration region of the body with a heated member to sterilize the surface.

20. (New) A method as defined in claim 18, wherein the sterilizing step includes
providing a laser source, and transmitting radiation from the laser source onto the penetrable surface of the needle penetration region of the stopper body to sterilize the surface.

21. (New) A method as defined in claim 17, further comprising the step of using the body
to thermally insulate the substance in the container from the laser energy applied by the laser source to avoid thermal damage to the substance in the container.

22. (New) A method as defined in claim 17, wherein the step of providing a resealable stopper includes providing a body defining an underlying portion formed of a first material compatible with the predetermined substance and defining a substance-exposed surface exposed to the predetermined substance within the container; and a resealable portion overlying the underlying portion, the resealable portion and underlying portion being penetrable by the needle for introducing the predetermined substance through the stopper and into the container, wherein

the penetrable region of the underlying portion is substantially infusible in response to the application of thermal energy from the laser source, and the penetrable region of the resealable portion is fusible in response to the application of thermal energy from the laser source to form a gas-tight seal between the resealable portion and the substance in the container upon removing the needle therefrom.

23. (New) A method as defined in claim 18, wherein the sterilizing step includes achieving an approximately 6 log reduction in bio-burden on the needle penetration region of the stopper.

24. (New) A method as defined in claim 23, further comprising the step of sterilizing the needle penetration region within a cycle time of approximately 0.5 seconds.

25. (New) A method as defined in claim 17, further comprising the step of introducing substance through a first fluid passageway of the needle, and allowing fluid to flow out of the container through a second fluid passageway upon introducing substance from the first fluid passageway into the container.

26. (New) A method as defined in claim 17, comprising the step of introducing a preservative-free substance through the needle and into the container.

27. (New) A method as defined in claim 18, comprising the step of sterilizing the sealed, empty container by the applying radiation thereto.

28. (New) A method as defined in claim 17, comprising the step of transmitting the laser radiation at a predetermined wavelength of approximately 10.6 μm .

29. (New) A method as defined in claim 17, comprising the step of transmitting the laser radiation at a predetermined wavelength of approximately 1.06 μm .

30. (New) A method as defined in claim 17, comprising the step of transmitting the laser radiation at a predetermined power within the range of approximately 15 to 30 Watts.

31. (New) A method as defined in claim 17, wherein the container is a vial, and the substance is a medicament.